

Research article

Socioeconomic growth of EU countries: Key drivers, regional disparities, and lessons for Ukraine's integration

Crecimiento socioeconómico de los países de la UE: factores clave, disparidades regionales y lecciones para la integración de Ucrania

Kseniia Chichulina¹: National University "Yuri Kondratyuk Poltava Polytechnic", Ukraine.
chichulinak@ukr.net

Oleh Ivashchuk: West Ukrainian National University, Ukraine.
o.v.ivashchuk@wunu.edu.ua

Vitaliy Zapukhlyak: West Ukrainian National University, Ukraine.
vitaliyzapukhlyak@gmail.com

Liudmyla Sakharnatska: State University "Uzhhorod National University", Ukraine.
liudmyla.sakharnatska@gmail.com

Vladyslav Kindrativ: Interregional Academy of Personnel Management, Ukraine.
vkindrativ9@gmail.com

Date of Reception: 12/11/2025

Acceptance Date: 13/12/2025

Publication Date: 18/12/2025

How to cite the article

Chichulina, K., Ivashchuk, O., Zapukhlyak, V., Sakharnatska, L., & Kindrativ, V. (2026). Socioeconomic growth of EU countries: Key drivers, regional disparities, and lessons for Ukraine's integration [Crecimiento socioeconómico de los países de la UE: factores clave, disparidades regionales y lecciones para la integración de Ucrania]. *European Public & Social Innovation Review*, 11, 01-22. <https://doi.org/10.31637/epsir-2026-2167>

¹ **Corresponding author:** Kseniia Chichulina. National University "Yuri Kondratyuk Poltava Polytechnic" (Ukraine).

Abstract

Introduction: The study aims to analyze key factors shaping the socio-economic development of European regions by examining development models, economic indicators, and support tools. The object of the study is the socio-economic development of European regions and its comparison with similar processes in Ukraine. **Methodology:** The research methodology is based on the analysis of theoretical models of socio-economic development, index methods and comparative analysis on the example of European countries and Ukraine. **Results and Discussion:** The results show that the successful socio-economic development of European regions largely depends on sustainable development policies, innovation strategies, and investments in human capital. Countries like Switzerland and Finland show the value of strong educational, environmental, and tech policies for sustainable development, while Ukraine faces challenges such as regional inequality and institutional reform. The analysis of EU policy has shown that regional support instruments, such as development funds and climate change adaptation, can be used to improve the situation in Ukraine as well. **Conclusions:** The practical significance of the study is that it provides recommendations for improving the effectiveness of Ukraine's economic policy in the context of European integration, including infrastructure modernization, human capital development, and adaptation to changing economic conditions.

Keywords: economic progress; socio-economic development; sustainable development; global instability; economic integration; regional disparities; innovation; human capital.

Resumen

Introducción: El estudio tiene como objetivo analizar los factores clave que determinan el desarrollo socioeconómico de las regiones europeas mediante el examen de modelos de desarrollo, indicadores económicos y herramientas de apoyo. El objeto del estudio es el desarrollo socioeconómico de las regiones europeas y su comparación con procesos similares en Ucrania. **Metodología:** La metodología de la investigación se basa en el análisis de modelos teóricos de desarrollo socioeconómico, métodos de índices y análisis comparativos tomando como ejemplo los países europeos y Ucrania. **Resultados y discusión:** Los resultados muestran que el éxito del desarrollo socioeconómico de las regiones europeas depende en gran medida de las políticas de desarrollo sostenible, las estrategias de innovación y las inversiones en capital humano. Países como Suiza y Finlandia demuestran el valor de unas políticas educativas, medioambientales y tecnológicas sólidas para el desarrollo sostenible, mientras que Ucrania se enfrenta a retos como la desigualdad regional y la reforma institucional. El análisis de la política de la UE ha demostrado que los instrumentos de apoyo regional, como los fondos de desarrollo y la adaptación al cambio climático, también pueden utilizarse para mejorar la situación en Ucrania. **Conclusiones:** La importancia práctica del estudio radica en que ofrece recomendaciones para mejorar la eficacia de la política económica de Ucrania en el contexto de la integración europea, incluyendo la modernización de las infraestructuras, el desarrollo del capital humano y la adaptación a las condiciones económicas cambiantes.

Palabras clave: progreso económico; desarrollo socioeconómico; desarrollo sostenible; inestabilidad global; integración económica; disparidades regionales; innovación; capital humano.

1. Introduction

Socio-economic development is an important factor determining the level of prosperity, stability and competitiveness of individual European regions (Chorii, 2023).

Infrastructure development, access to education and healthcare services, and an effective social security system are all interconnected and form the basis for stable and balanced development at the regional level. For Europe, socio-economic development is important at all levels, from national to regional. The EU aims to reduce economic and social disparities between different regions by providing financial support through development funds, infrastructure investments, and innovation promotion (Yermachenko et al., 2023). For example, Poland and the Czech Republic have implemented significant institutional changes by transitioning to market economies and democratic political structures, which contributed to their rapid economic development (Yeremieiev, 2024).

The current state of globalization, economic integration, and technological change poses new challenges for European countries to support sustainable development, reduce inequality, and ensure a high standard of living for their citizens (Kalina et al., 2022; Oliinyk et al., 2022; Bielousov et al., 2023; Byrkovych et al., 2023). Regional disparities, changing socio-economic conditions, political and institutional transformations – all these factors have an important impact on development processes, both at the level of individual states and at the level of the European Union as a whole (Shevchenko, 2021). A detailed characterization of this topic is especially important for Ukrainians, as the analysis of successful practices and policy initiatives of European countries can be the key to effective reforms in Ukraine, which critically needs them.

In the context of rapid changes in the economy, in particular due to the effects of global crises, war, and pandemics, the issue of effective socio-economic development of regions is becoming even more relevant. The European experience requires analysis both at the level of pan-European initiatives and at the level of specific states, which will allow the use of international experience to achieve the success of the Ukrainian state (Slavskyi, 2022).

2. Literature review

The problem of socio-economic development of European regions is actively studied in economic science. Numerous domestic and international scholars and practitioners have studied the problems of regional development and trends in regional policy in different countries of the world, including the European Union and Ukraine (Cherepiekhina, 2025).

This topic is revealed in the studies of such authors as Dolishnyi (2003) conducted research on the socio-economic development of the regions of Ukraine, in particular, studying the impact of investment activity on the development of territorial communities, Kyzym (2006) analyzed and improved the mechanisms of the European Union's regional policy, in particular on sustainable development and the impact of European integration processes, Varnalii et al. (2023) focused on the problems of economic dynamics in the context of interaction between central and local authorities, Mokiy et al. (2004) studied social policy issues in the context of regional differences, in particular in European and post-Soviet countries, Fedorenko et al. (2017) characterized the development of small and medium-sized enterprises at the regional level, in particular in the context of globalization and integration processes, which were studied during 2017–2024, Romanuk & Romanuk (2023) analyzed the impact of institutional changes on the development of regional economies and studied the issues of economic efficiency in the context of modern transformation processes, Tkachuk (2023) focused on the management of regional economies in the context of the economic crisis and globalization.

Important are the studies in the field of economic growth theory, analysis of income convergence and reduction of inequalities between regions conducted by Barro & Sala-i-Martin (2004). Also, inequality in the development of EU regions, as well as political and economic factors influencing this process, were studied by Riccardo Fiorenza and Jean-Jacques Laffont (Fiorenza & Laffont, 2001). The effectiveness of the cluster concept was evaluated by Richard Martin and Paul Sunley. The researchers examined the benefits of these concepts for economic growth in European regions (Martin & Sunley, 2003). Richard Vickerman studied the economic aspects of EU integration (Vickerman, 2013).

Victor Ginsburg and Michel Thiessen described the causes and consequences of economic imbalances in the EU. The researchers examined the economic and political factors that determine uneven development between regions (Ginsburgh & Thiessen, 2014). John Bachtler and Carlos Mendez studied the EU cohesion policy and its impact on regional development. The object of their research was socio-economic inequality in European countries (Bachtler & Mendez, 2007).

The importance of investment in education was studied by Ivo Izvorski, who emphasized the problem of education quality. The author argued that improving the quality of higher education can accelerate economic growth and human capital development (Izvorski et al., 2024). Additionally, researchers such as Alice Bertoletti, Jasmina Berbegal-Mirabent and Tommaso Agassisti have paid considerable attention to the analysis of regional economic development in Europe (Bertoletti et al., 2022).

Comparative regional or sub-regional studies of the integration of European youth into the labor market were conducted by Rosario Scandurra and co-authors (Scandurra et al., 2021).

The topic of socio-economic development of European regions has been the subject of a large number of studies. However, no comprehensive analysis has yet been conducted that would take into account the specifics of European countries and regional differences. A deeper study is needed of integration processes, the comparative characterization of which would provide practical implications for Ukraine. In particular, little research has been done on the interconnection of social factors (access to education and health services, economic growth and the level of regional disparities). Also important is the imperfect understanding of how integration processes affect Ukraine's socioeconomic development.

2.1. Purpose and objectives of the study

The purpose of this study is to examine the socio-economic development of European regions and assess the possibilities of applying their experience to the development of Ukraine.

The objectives of the study are:

1. Analysis of the socio-economic parameters of the development of European regions.
2. Assessment of factors that promote or hinder socio-economic development.
3. Study of instruments and policies to support regional development in the EU.
4. Analysis of regional disparities and their impact on socio-economic growth.
5. Assessment of Ukraine's development prospects based on European experience.

2.2. Objectives of the study

Based on the purpose of the study, we can outline the following objectives:

- analysis of modern theories and approaches to socio-economic development;
- comparison of indicators of socio-economic progress in different European countries;
- studying the impact of EU regional policy instruments on the socio-economic development of member states;
- comparative analysis of regional disparities and their impact on overall development;
- consideration of the challenges faced by countries in achieving sustainable development.

2. Methodology

To achieve the results of this study, a comprehensive approach was used. It is based on comparative analysis, which allows to identify key factors of socio-economic development of European regions and compare them with the conditions and characteristics inherent in Ukraine. The analysis was conducted using secondary statistical data published by international organizations such as the World Bank, the European Union, the International Monetary Fund, and national statistical agencies (World Bank, 2022).

Official statistical reports published by government agencies and international organizations over the last 5 years were used to determine socio-economic indicators such as GDP, unemployment, access to education and healthcare (World Health Organization, 2021). In addition, to compare institutional approaches to development and the use of state support instruments, the study included an analysis of policies and programs implemented in the EU, as well as the study of successful cases from countries such as Germany, Sweden and Poland.

The qualitative analysis method was used to study the theoretical aspects of socio-economic development, such as institutional theories and models of economic growth. Scientific articles, monographs, and reports by leading economists covering regional development and sustainable growth were systematized and analyzed.

Additionally, the study used the case study method to investigate specific examples from European countries that have made significant achievements in the areas of economic stability and social policy. This allowed for a deeper understanding of the mechanisms that lead to successful development at the regional level, as well as an assessment of the possibility of their adaptation to the conditions of Ukraine.

The above methods were applied within the framework of a theoretical approach, focusing on interdisciplinary knowledge of economics, politics and social sciences, which allows for a comprehensive assessment of various aspects of socio-economic development and the development of appropriate recommendations.

3. Results

As a result of the study, the author obtained experimental and theoretical data that allow to assess the socio-economic development of European regions. In particular, the theories and approaches to socio-economic development are identified, among which the growth models of specific European countries, key structural changes, and institutional theories are clearly distinguished. Thus, the characterization of such a parameter as a growth model allows us to see how an economy can grow in the long term under certain economic processes, investments, and technological changes. This refers to the impact of factors such as investment, innovation, and human capital development (Kovalov et al., 2023).

The Solow model, or neoclassical growth model, is considered to be one of the most important growth models (Mashkina, 2023). This trend interprets economic growth as dependent on three main factors: physical and human capital, and technological innovation. This model explains the steady growth of a country's economy by increasing investment in capital and technology. Germany is one of the best examples of implementing this model. The country's government actively invests in educational programs, particularly in STEM (science, technology, engineering, and mathematics), maintains a large number of universities and research institutes, and supports the development of innovative startups (Ministry of Education and Science of Ukraine, 2024). Since 2008, Germany has developed a number of initiatives aimed at integrating STEM into the education system at all levels.

These include the Dresden Resolution, the MINT for the Future program, and the Recommendation for Strengthening MINT Education. STEM programs in Germany are focused on combining theory with practice through extracurricular activities and practical courses in schools. This helps to attract students to technical and engineering disciplines. In addition, Germany is actively investing in the development of STEM education through new initiatives, such as the MINT Action Plan, which aims to improve the situation in the field (Yang, 2015). For example, the German government has allocated more than 5 billion euros for national programs to support research in science and engineering through the Excellence Strategy initiative (German Research Foundation, 2023). This program supports 11 universities and 57 research institutes working on advanced technologies, artificial intelligence and robotics.

Another important area is the Digital Hub Initiative program, which supports the development of startups in the field of digital technologies. As part of this initiative, the German government is investing in technology hubs in cities such as Berlin, Munich, and Hamburg. Thanks to such investments, Germany is creating conditions for the development of innovative companies, where young entrepreneurs can receive funding for their projects in the field of technology and engineering (Federal Statistical Office of Germany, 2023).

In terms of statistics, according to the Federal Statistical Office of Germany, in 2023, scientific and technological research in Germany accounted for about 3% of the country's GDP, which is one of the highest rates among developed countries. Programs to support startups have also shown significant growth: over the past 5 years, the number of technology startups in Germany has increased by 20%, and the level of investment in these companies has increased by 15% annually.

The next model is the endogenous growth model, which states that economic growth not only depends on external factors such as technology or capital, but can also be driven by internal processes in the economy. Important factors include innovation, entrepreneurship, government policies, and the creation of conditions for high labor productivity.

Sweden is one of the most successful examples of endogenous development. The country invests in education, science, technology, and innovation, which contributes to sustainable economic growth (the Royal Institute of Technology (KTH) and Lund University, which are leading centers of innovation and research). It has significantly improved the standard of living of its citizens through strong infrastructure and high quality education, which are key components of endogenous development (National Defense University of Ukraine, 2020).

Investment and capital accumulation model. According to this model, economic growth is determined by the intensity of investment in physical capital (construction of factories, roads, bridges) and human capital (education, training). Accordingly, the more investment, the more resources are available for economic development and growth. For a more thorough analysis of economic growth models, it is useful to consider the following table (see Table 1).

Table 1.

Models of economic growth in EU countries

Growth model / country	Model description	Key features and tools	The level of development before 2000	Achievements by 2020
Model Solow / Germany	Economic growth depends on three main factors: physical capital, human capital, and technological innovation.	Active investment in education (STEM), support for scientific research through national programs (Excellence Strategy). The German government allocates billions of euros to support technology and research. In 2023, scientific and technological research accounted for 3% of the country's GDP.	By 2000, Germany had gone through reunification and transformation after the fall of the Berlin Wall, maintaining strong industrial sectors, but overall its economy was relatively stable, with problems in the transition period.	Germany's GDP in 2020 amounted to USD 3.8 trillion (according to the World Bank). Thanks to steady investment in science and technology, Germany has made significant economic progress, becoming one of the leading countries in Europe. High level of GDP per capita (45,000 USD per capita) (Elk, 2023)
Endogenous growth model / Sweden	Economic growth is driven not only by external factors, but also by internal processes: innovation, entrepreneurship, government policies, and conditions for high labor productivity.	Investments in education, science and technology, infrastructure development and high quality education contribute to sustainable economic growth. Strong innovation and education base.	Until 2000, Sweden was a developed economy with a high level of social welfare, but with some economic difficulties due to globalization and competitive challenges.	Sweden's GDP in 2020 amounted to USD 601 billion (according to the World Bank). Sweden has become one of the leaders in innovation indices, demonstrating stable economic growth, high quality of life, low unemployment, and influential entrepreneurial innovation (World Bank, n.d.). International recognition as a leader in technology and education.

Investment and capital accumulation model / Spain	Economic growth depends on the intensity of investment in physical capital (factories, infrastructure) and human capital (education).	After joining the European Union, Spain made massive investments in infrastructure and industry. This included modernization of transportation networks, energy facilities, and construction of new factories. In the 2000s, Spain began to actively implement innovative technologies, increasing the efficiency of the national economy.	Until 2000, Spain was a relatively less developed country that was undergoing a transition to a modern industrial economy after the Franco dictatorship.	Spain's GDP in 2020 amounted to USD 1.2 trillion (according to the World Bank). Spain has significantly modernized its infrastructure and industry and improved social conditions, which has contributed to a high level of economic development with a GDP per capita of USD 25,000. Investments in infrastructure and technology have become important drivers of economic growth (Eurostat, 2023).
---	---	--	--	---

Source: developed by the author.

Structural changes in agriculture, industry and services have become another key factor in the development of the European region. This refers to the transition of economies from agrarian to industrial and then to a post-industrial state, where services, information technology, and knowledge play a greater role (Moroz et al., 2024). Structural changes are known to be divided into types. The first type is the transition from an agrarian to an industrial economy. It is a reorientation of the economy to industrial production, which makes it possible to increase labor productivity and ensure the growth of national income (National Bank of Ukraine, 2022). In the European region, the United Kingdom went through a stage of industrialization in the nineteenth and twentieth centuries, which contributed to rapid economic growth, rising welfare, and increased employment (Yeriemieiev, 2024).

The second is economic diversification, which means promoting the progress of industries such as high technology, pharmaceuticals, and financial services without weakening key industries (agriculture or natural resource extraction). An example of economic diversification in Europe can be seen in Norway. The country was initially focused on oil and gas production, but has now shifted its focus to the development of technology and innovation sectors, as well as investments in education, healthcare, and sustainable agriculture. The Norwegian government pays special attention to the development of clean technologies and alternative energy, which allows the country to reduce its dependence on oil and gas while increasing economic stability (Zhao & Xu, 2022).

Over the past few years, a number of important programs and projects have been implemented in this area. In particular, the Green Platform Program, launched in 2020, is one of the main tools to support the development of renewable energy sources and clean technologies in Norway. As part of the program, the government has allocated more than NOK 2 billion to invest in CO2 reduction technologies.

Projects related to the development of wind and solar energy received funding (Larsen & Høyer, 2022). Another striking example is the Norwegian Climate Investment, a program launched in 2021 (UNESCO, 2021). The goal of the program is to develop and implement new technologies in the field of renewable energy. As part of this initiative, the Norwegian government has invested NOK 1.5 billion in reducing greenhouse gas emissions and increasing the efficiency of renewable energy sources (Pedersen & Holm, 2023).

The third type is technological change and the transition to the information economy. This process is characterized by the growing influence of information technology, telecommunications, and high value-added services. An example is Estonia, which has become one of the leaders in the IT sector. The state has introduced digital technologies at all levels of society (Järv, 2019). The country is actively developing e-government (online identification, e-voting, and digital services for citizens).

For example, the e-Residency program, launched in 2014, allows entrepreneurs from all over the world to register a business in Estonia, access banking services and payment systems, and manage the company remotely. As of 2023, more than 80,000 people from different countries have become e-residents, and more than 17,000 companies have been registered through this program. Such an increase in interest in Estonia indicates a strong demand for digital services (Kallaste & Lehtsalu, 2022).

Another important aspect of the program's implementation is electronic voting. The i-Voting program, which was launched in 2005, allows Estonian citizens to participate in elections via the Internet. This makes the election process fast, accessible and convenient. In 2019, about 44% of Estonians took part in the parliamentary elections via electronic voting. This is one of the highest rates in the world (Rossi & Tuomi, 2023).

Estonia is also a center for IT startups and outsourcing services, attracting international companies. The Startup Estonia program, established in 2016, promotes the development of the startup ecosystem by providing financial and advisory support to new technology companies. As of 2023, more than 1,500 startups were registered in Estonia, particularly in areas such as financial technology (FinTech), artificial intelligence, and blockchain. The program has created more than 30,000 IT and startup jobs and attracted more than €200 million in investment in 2022 (Kase & Tinn, 2022).

In addition, Estonia actively supports innovation in the technology sector through R&D investment programs. One such project is the Tehnopol Science and Business Park, which provides startups with access to laboratories, funding, and international partnerships. In 2023, the park supported more than 300 technology companies, particularly in software development and IT consulting (Järv, 2019).

Having described the main aspects of the socio-economic development of the European region, the role of institutions (political, legal, economic, and social) cannot be overlooked. Institutions provide a framework for the functioning of the economy, defining the rules and interaction between participants in economic processes (Shtan, 2023).

New institutional economic theory (Douglas North). According to this theory, the success of economic development depends on effective institutions, such as the legal system, property protection, and contractual relations, which reduce uncertainty and promote business and investment (Ushchapovskyi, 2023). Countries with an effective legal system, such as Germany or Sweden, have a high level of economic development because they have clearly defined rules that stimulate investment and economic activity (Savchyn & Perepeliukova, 2024).

Theory of institutional change (Kenneth Pomerantz). Focuses on the temporal changes in institutions and the impact they have on the development of economies. In particular, the transition from authoritarian to democratic political systems, from planned economies to market economies contributes to more efficient economic development.

For example, after the collapse of the Soviet Union, European countries, such as Poland and the Czech Republic, made significant institutional changes, moving to market economies and democratic political structures, which contributed to their rapid economic development (Yeriemieiev, 2024). And although the European Union is taking steps to reduce economic inequalities between regions through the Cohesion Policy, there are still significant differences between developed and less developed regions, and even these may increase over time. Cohesion policy usually includes financial assistance for infrastructure, education, science and technical innovation in regions with lesser opportunities.

However, this problem remains relevant, and regional disparities are becoming more pronounced (European Commission, 2020b). Certain regions, such as Eastern Europe, Greece, southern Italy, southern Spain, and Portugal, have significantly lower levels of economic well-being compared to other parts of the European Union. This emphasizes that there are significant economic gaps even within the union (Barbero & Rodríguez-Crespo, 2022). In addition, the northern regions are characterized by low levels of social exclusion, meaning that fewer people face problems of poverty and exclusion from basic social and economic benefits.

On the other hand, the regions mentioned earlier (Eastern Europe, southern Italy, southern Spain) have a higher risk of poverty and social exclusion, which indicates a greater vulnerability of their populations (European Commission, 2020a). Thus, institutional quality is a significant determinant of economic development, as inefficient institutions can impede the accumulation of human capital and technological innovation, which in turn slows down economic progress. The quality of the institutional environment has a direct impact on economic productivity, as institutions can both facilitate and constrain development processes (Aghion et al., 2022).

The theory of inclusive institutions (Daron Acemoglu, James Robinson) (Mokhniuk, 2022). The authors of this theory argue that inclusive institutions are the basis for long-term and sustainable development. Their absence can lead to economic and social inequalities, which in turn hinders development. Among European examples, Ireland can be singled out. The country has achieved significant improvements in its economic development, albeit with complex problems in the implementation process. One cannot overlook the Social Inclusion and Community Activation Program (SICAP) (2015), which was created to combat poverty and social exclusion.

This program was aimed at supporting the most vulnerable groups (unemployed, youth, people with disabilities and other socially disadvantaged groups). It provided financial assistance to communities and supported social enterprises and organizations working to integrate these groups into society (Danylenko & Sokolska, 2017). Also worth mentioning is The Action Plan for Jobs (2012), an Irish program to combat high unemployment and promote economic development through job creation. It focused on small and medium-sized enterprises, providing subsidies for innovative companies and supporting startups. The result was the creation of more than 170,000 new jobs by 2020.

The socio-economic development of a region is a multifaceted process that includes not only economic but also social aspects. In order to assess the level of this development in the European region, we will use additional parameters and indicators. Parameters include values that help to assess the overall level of development, such as gross domestic product (GDP), unemployment, income, access to basic social services, etc. Indicators, on the other hand, are specific measures used to assess the level of development and changes in the economy and social sphere.

They allow us to track changes in economic processes and quality of life. These include GDP growth, unemployment, income, access to education and healthcare services. GDP growth is the main macroeconomic indicator of economic development. Ireland is an example of a European country with a steady increase in gross domestic product (GDP) over the past five years (State Statistics Service of Ukraine, 2022; Central Statistics Office, 2025). The unemployment rate shows the efficiency of labor utilization in the economy.

In the European Union, it varies depending on economic conditions, and in particular, in Greece, it remained high after the 2008 global financial crisis, reaching 27% in 2013. But by 2020, the unemployment rate had dropped to 17%, thanks to the 2012 Greek Labor Law Reform, which was part of a broader economic program under financial assistance from the EU, the International Monetary Fund (IMF) and the European Central Bank under three major bailout programs (2010, 2012, 2015) (European Commission, 2020a).

Switzerland, for example, has one of the highest per capita incomes in the world, which is the result of stable economic policies, high levels of investment, and a developed financial infrastructure (OECD, 2021). Access to education and healthcare are critical indicators of quality of life and social development. The level of access to quality education and healthcare services determines not only the physical and intellectual development of the population, but also affects overall social progress. The Scandinavian countries (Sweden, Norway, Denmark) have a high level of access to education and healthcare services, which contributes to the high standard of living and economic development of these countries (Aalborg & Olofsson, 2020).

The demonstrated examples of socio-economic development of European regions (through the prism of different growth models and additional parameters and indicators) form a specific list of countries in the region whose experience can be applied to countries that are trying to improve their own socio-economic development. This list includes Germany, Sweden, and Ireland. Germany is actively investing in education and innovation, while Sweden is investing in science and technology, which contributes to endogenous development. Ireland shows stable GDP growth due to attracting investments and developing the technology sector.

The experience of Norway and Estonia is also noteworthy, where the focus is on structural changes in the economy, transition to a post-industrial society, and diversification of economies. Through a critical analysis of the policies of these countries, it is possible to form a group of important factors that should be taken into account when planning Ukraine's socio-economic development. They can be summarized in the form of a table (see Table 2).

Table 2.*Analysis of policies of representatives of the European region*

Country / Region	Economic development	Social cohesion	Infrastructure and technology	Investment and decentralization	Education and human capital	Resilience to change (climate, globalization)
Spain	After the 2008 crisis, Spain again stabilized its economy through reforms. The high unemployment rate remained until 2014, but it will decrease by 2020 due to labor reforms.	Social inequality has been reduced through government programs. Support for vulnerable groups through social programs has been introduced.	Active investment in infrastructure and development of smart cities. Increasing the digitalization of the economy.	Implementation of the decentralization policy. Investing in less developed regions (especially through European funds).	Improving vocational education and retraining programs.	Adaptation to climate change through investments in the green energy sector.
Greece	Slow recovery from the 2008 financial crisis. Development of tourism and agriculture contributed to economic growth after 2015.	Unemployment rate has increased due to structural reforms. Policies are in place to support the most vulnerable groups.	The need to modernize infrastructure due to the crisis, but gradual reconstruction of ports, roads and transport.	Co-financing with the EU to support local businesses. Focus on tourist regions and farming communities.	Programs for the development of small and medium-sized businesses and training for young people.	Implementation of environmental standards in industry and tourism.
Ireland	Rapid economic growth after the 2008 crises. Development of the technology sector and multinational companies.	Improved living standards due to economic growth, but still social inequalities in some regions.	Strong investments in digital infrastructure, particularly in technology and communications.	Decentralization and changes in local governance have increased the efficiency of using European funds.	Focus on higher education and creating opportunities for the development of technological specialties.	Adaptation to technological changes, environmental initiatives, particularly in the energy sector.
Poland	After 2008, Poland achieved stable economic growth due to favorable policies and investments.	Cohesion policies were aimed at reducing economic disparities between cities and villages.	Infrastructure projects through the EU have supported the development of modern transportation and digital networks.	The EU's investment policy for small and medium-sized enterprises was of great importance.	Education reform, improving the quality of school and higher education, and emphasizing vocational training.	Investing in green energy and climate change adaptation.

Source: compiled by the authors based on European Commission (2017).

4. Discussion

European regions demonstrate different approaches to socio-economic development, particularly in the context of supporting weaker regions. Successful countries, such as Sweden, Germany, and Switzerland, have stable economic performance, which has enabled them to make significant progress in supporting innovation, infrastructure, and business development. One of the most effective approaches is to balance efficiency and equity in economic development policies. As the experience of Switzerland, Finland, and Sweden shows, investments in business and innovation in weaker regions, as well as tax incentives for businesses in these areas, can contribute to faster local economic growth. The European Union, as a driving force for the development of member states' economies, has demonstrated many positive processes, some of which can be summarized in the table below (see Table 3).

Table 3.

Efficiency and equality goals in regional policies

Performance targets: investing in business in all regions	Mainly efficiency, but with more funding for weaker regions	Efficiency and equality – investing in business in weaker regions	Equality – job creation or quality of life in weaker regions
Economic development strategies of regional governments in all regions: Austria, Switzerland, Germany, Spain, Italy, United Kingdom	Contracts between the state and regions for economic development in all regions: France	Economic development programs in all regions: Switzerland, Finland, Sweden	Strategies for businesses in any region: United Kingdom
Clusters: Finland, Netherlands, Norway, Sweden	European cohesion policy as a whole – additional national emphasis on weaker regions, e.g. Denmark, Germany, Finland	Economic development strategies in all regions, but with more funding for weaker regions: Denmark	Grants for business investment/innovation in weaker regions: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Finland, Greece, Ireland, Italy, Portugal, Spain, Sweden, Sweden, United Kingdom
Tax incentives for business investment/innovation in weaker regions: Switzerland, Germany, France, Italy	Financing business context/infrastructure in weaker regions: Germany, Spain, France, Italy, Portugal	Transportation assistance in weaker regions: Greece, Finland, Norway, Sweden, United Kingdom	Grants to create jobs in weaker regions: Germany, Italy, Sweden
Tax incentives for job creation in weaker regions: France, Italy, United Kingdom	Tax incentives for all businesses in weaker regions: France, Norway	Financing local services/quality of life in weaker regions: Greece, Norway	Fiscal equalization mechanisms: all countries

Source: Eurosocal II (2025).

However, it is important to note that not all European countries have the same level of development. For example, many Eastern European countries are facing major economic challenges, not only due to the transition from a centrally planned economy to a market economy, but also to the negative effects of external and internal crises. For countries such as Poland, Romania, and Bulgaria, EU programs to support economic cohesion are important, helping not only to modernize infrastructure but also to create new jobs, attract investment, and provide access to quality healthcare and education services.

Moldova demonstrates low GDP per capita, high unemployment and emigration. Albania has problems with infrastructure, social services, and high unemployment. Kosovo is also characterized by high unemployment, poor infrastructure development and economic stability. North Macedonia faces a low standard of living and high unemployment. Ukraine should not be overlooked. Ukraine, despite its significant potential in various sectors of the economy, faces serious socio-economic challenges. Developing innovation, increasing investment, and raising incomes remain critical issues for these countries. However, without proper reforms in education, healthcare and social security, as well as without adequate support for business and job creation, socio-economic development will remain limited.

The issue of effective use of international support programs and ensuring investments in the weaker regions of Europe is extremely relevant. Especially for Ukraine. It is important for the country not only to introduce tax incentives for businesses in remote regions, but also to intensify the use of fiscal equalization mechanisms. This will help reduce economic disparities between different regions of the country.

Security and stability issues remain important for development. Military conflicts have a direct impact on economic development, reduced investment, and capital outflows. In this regard, the role of defense policy and the development of cybersecurity is important. Modern threats can significantly affect the economic stability of a country. Countering cyberattacks and strengthening defense capabilities should be prioritized, as they provide the very possibility of socio-economic development.

This theoretical study can be of practical importance for Ukraine. After all, the mistakes and achievements of others are lessons for growth and warnings against mistakes. Ukraine should focus on the factors that contribute to development. These include investments in innovation and business (support for innovation, small and medium-sized businesses), reducing economic inequality between regions (support for weaker regions through public funding, tax breaks, and infrastructure investments), improving access to education and healthcare (access to medical and educational services), and strengthening national security (defense capability, cybersecurity).

It is obvious that the most successful European countries (Sweden, Germany) have more stable economic indicators. They have achieved this thanks to policies that support innovation, high levels of investment, and the implementation of social programs. In Ukraine, despite some positive changes, such results have not yet been achieved. The reason for this is the lack of comprehensive reforms and serious economic difficulties. Ukraine, given its strategic geographical position, cultural proximity to Europe, and significant potential in various sectors of the economy, must undergo significant socio-economic transformations. An assessment of Ukraine according to the above parameters will help to identify the stages of development the country is at and what positive practices from European regions it can adopt.

5. Conclusions

The socio-economic development of European regions includes such indicators as GDP growth, unemployment, income and access to basic social services. The article analyzes these factors and their impact on the overall development of the regions.

It is found that the socio-economic development of European countries is significantly influenced by internal and external factors. These include economic reforms, political stability, as well as globalization and integration processes. Each of these factors can affect the socioeconomic development of a particular region. The EU is trying to reduce the economic gap between regions and combat regional disparities through its Cohesion Policy. But the difference continues to grow. Regions with lower GDP per capita face higher levels of poverty and social exclusion, pointing to the link between economic development and social well-being. Eastern European countries, the southern regions of Italy, Spain and Portugal have the lowest rates of economic development and social inclusion. At the same time, the northern regions demonstrate better results in these aspects.

The EU's activities are aimed at overcoming the disparity. To this end, it is actively financing infrastructure development and investing in financial systems. However, the reasons for the differences between regions are often historical. Many countries that have become economic leaders have a long history of developing industry, trade, and institutions. For example, in Western Europe, powerful retail chains, banks, and industry have been developing since the 1690s. These factors gave the region an advantage in infrastructure and economic development. In addition, regions with stable political regimes and effective governments could more easily invest in infrastructure and social services.

For example, countries like Germany, France, or Sweden have strong institutions and political stability. This has contributed to their economic growth. It is important to note that regions with a high level of education and skill have better prospects for development. Sweden, Norway, and the Netherlands are examples of countries where investments in education and research create strong human capital. This, in turn, contributes to the development of innovative industries. These countries have invested considerable resources to achieve this level of development.

Ukraine, despite its considerable potential, faces a number of challenges in these areas. Budgetary policies, investments in infrastructure and education, as well as effective integration into international economic structures are important tools to support development. The development of the Scandinavian countries is an example of the successful application of these tools. Sweden has placed significant emphasis on investments in human capital and technological innovation. This has become a key element of its attractiveness to people (Peters & Wouters, 2021).

The biggest challenges for Ukraine remain uneven regional development, inadequate access to education and healthcare, and corruption. To overcome these problems, Ukraine needs to adopt new policies aimed at improving infrastructure and reducing social inequalities between regions.

The results of the study showed that Ukraine is showing a trend toward gradual improvement in socioeconomic indicators, but this is not happening fast enough. Compared to other European countries, such as Poland and the Czech Republic, the pace of development in Ukraine is still insufficient to achieve high living standards and economic stability.

The main limitation of the study, however, is the lack of consideration of the parameters of digital transformation in European regions.

An important area for further research is to examine the relationship between institutional change and socioeconomic development, especially for countries that are seeking development. Since the processes of adaptation to European economic standards can be complex, research should be continued. To improve Ukraine's socio-economic development, it is necessary to continue deeper reforms, focusing on international standards and practices of successful EU countries.

Adapting the Horizon Europe program to Ukrainian realities could be worthwhile, as it would help to promote innovation in Ukraine, create new jobs, and increase international competitiveness. In the future, it is worth paying attention to analyzing the impact of digitalization and technological innovations on socio-economic development, as they are becoming important drivers of growth in the modern world. In general, the findings of the study confirm the importance of a comprehensive approach to assessing socio-economic development and the need for continuous reforms to achieve sustainable development both in Ukraine and other European countries.

6. References

- Aalborg, K., & Olofsson, J. (2020). *Understanding the role of higher education in regional development: The case of the Nordic countries*. Nordic Council of Ministers. <https://norden.diva-portal.org/smash/record.jsf?pid=diva2:1478007>
- Aghion, P., Akcigit, U., & Howitt, P. (2022). The economics of innovation: An overview. *Empirical Economics*, 66(5), 1231-1260. <https://doi.org/10.1007/s00168-022-01127-9>
- Bachtler, J., & Mendez, C. (2007). The influence of EU cohesion policy on regional development. *European Planning Studies*, 15(5), 695-710.
- Barbero, J., & Rodríguez-Crespo, E. (2022). Technological, institutional, and geographical peripheries: Explaining regional disparities in the European Union. *Regional Studies*, 69, 311-332. <https://doi.org/10.1007/s00168-022-01127-9>
- Barro, R. J., & Sala-i-Martin, X. (2004). *Economic growth*. (2nd ed.). MIT Press. <https://mitpress.mit.edu/books/economic-growth>
- Bertoletti, A., Berbegal-Mirabent, J., & Agasisti, T. (2022). Higher education systems and regional economic development in Europe: A combined approach using econometric and machine learning methods. *Socio-Economic Planning Sciences*, 82. <https://doi.org/10.1016/j.seps.2022.101231>
- Bielousov, V., Mykolaiets, A., Platonova, H., Buhlak, O., & Chernysh, A. (2023). The Gig Economy and its Impact on Social Security and Social Protection of Employees. *Revista de Derecho de la Seguridad Social, Laborum*, 36, 279-289. <https://acortar.link/9FeOFH>

- Byrkovych, T., Denysiuk, Z., Gaievskaya, L., Akimova, L., Prokopenko, L., & Akimov, O. (2023). State Policy of Cultural and Art Projects Funding as a Factor in the Stability of State Development in the Conditions of Globalization. *Economic Affairs (New Delhi)*, 68(01), 199-211. <https://doi.org/10.46852/0424-2513.1s.2023.23>
- Central Statistics Office (2025). Gross Domestic Product at constant market prices. <https://acortar.link/cj6w2P>
- Cherepiekhina, O. (2025). Paradoxes of modern science: challenges, consequences, and solutions in social and behavioral sciences. *International Science Journal of Education & Linguistics*, 4(1), 50-62. <https://doi.org/10.46299/j.isjel.20250401.05>
- Chorii, Y. (2023). Socio-economic development of the region as an economic scientific definition. *Economy and Society*, 57. <https://doi.org/10.32782/2524-0072/2023-57-135>
- Danylenko, A. S., & Sokolska, T. V. (2017). Public management of socio-economic development of rural areas. *Economics and Management of Agriculture*, 1(2017), 5-12. <https://acortar.link/vuA4EX>
- Dolishnyi, M. I. (2003). *Regional policy and mechanisms of its implementation*. Scientific thought. <http://repository.ldufk.edu.ua/handle/34606048/30676>
- Elk, O. V. (2023). *Comparative analysis of the efficiency of labor resources use in Ukraine and Germany* (master's thesis, specialty 051 "Economics"). Zaporizhzhia National University. <https://dspace.znu.edu.ua/jspui/handle/12345/18399>
- European Commission (2017). Ninth report on economic, social and territorial cohesion. https://www.europe-en-france.gouv.fr/sites/default/files/9cr_highlights.pdf
- European Commission (2020a). Greece: Unemployment rate and trends. <https://ec.europa.eu/info/business-economy-euro/indicators-statistics>
- European Commission (2020b). Study on national policies and cohesion. Final Report Contract No 2017CE16BAT125. European Commission, Brussels.
- Eurosocietal II (2025). Regional development policies in the European Union: Efficiency vs. equity objectives. <http://sia.eurosocietal-ii.eu/files/docs/1400661224-E2.pdf>
- Eurostat (2023). GDP and main components - current prices [Data for Spain]. <https://ec.europa.eu/eurostat/databrowser/view/TEC00001/default/table?lang=en>
- Federal Statistical Office of Germany (2023). Scientific and technological research in Germany: Growth of investment in the STEM sector. <https://www.destatis.de>
- Fedorenko, V. G., Gryshchenko, I. M., Novikova, O. F., Olshanska, O. V., Melnyk, A. O., Voronkova, T. E., Denysenko, M. P., Voitovych, R. V., Cherkasov, A. V., Vlasov, V. I., Palytsia, S. V., Fedorenko, S. V., Hryshchenko, A. I., Yankovets, T. M., Shatska, Z. Y., Patyka, N. I., Pankova, O., Bokov, O. V., Bokova, S. M., Pinchuk, Y. B., & Pyaskivska, M. S. (2017). *The economy of Ukraine in the global and domestic dimensions*. DKS Center LLC. <https://er.knutd.edu.ua/handle/123456789/8904>

- Fiorenza, R., & Laffont, J. J. (2001). Spatial inequality in the European Union: A regional analysis. *Journal of European Economy*, 28(3), 312-330.
- German Research Foundation (2023). Excellence Strategy – Strategy for the development of scientific research in Germany. https://www.dfg.de/en/research_funding
- Ginsburgh, V., & Thissen, M. (2014). The EU and regional disparities: Understanding the causes and the implications. *European Economic Review*, 60, 54-72. <https://www.sciencedirect.com/science/article/abs/pii/S0014292114000159>
- Izvorski, I., Kasyanenko, S., Lokshin, M. M., & Torre, I. (2024). Europe and Central Asia Economic Update, Fall 2024: Better Education for Stronger Growth. <https://doi.org/10.1596/41997>
- Järv, P. (2019). Estonia's digital revolution: A leader in IT and outsourcing services. *Journal of Digital Innovation*, 25(4), 182-194.
- Kalina, I., Khurdei, V., Shevchuk, V., Vlasiuk, T., & Leonidov, I. (2022). Introduction of a Corporate Security Risk Management System: The Experience of Poland. *Journal of Risk and Financial Management*, 15(8), 335. <https://doi.org/10.3390/jrfm15080335>
- Kallaste, E., & Lehtsalu, L. (2022). E-Residency as a driver for entrepreneurship: A case study from Estonia. *International Journal of Entrepreneurship and Innovation Management*, 26(2), 107-122.
- Kase, A., & Tinn, K. (2022). Estonia as a tech hub: From digital innovation to global startup ecosystem. *Journal of Technology Transfer*, 47(7), 1075-1090.
- Kovalov, B., Ponomarenko, I., Borukha, A., & Tarasov, V. (2023). Disruptive technologies for ensuring economic and resource security of Ukraine. *Economy and Society*, 57. <https://doi.org/10.32782/2524-0072/2023-57-32>
- Kyzym, M. O. (2006). *Modeling sustainable regional development*. Publishing and design department of Information Technology Centre.
- Larsen, O., & Høyer, K. (2022). Hydrogen economy in Norway: Pathways towards a sustainable future. *Journal of Sustainable Energy Technology*, 13(2), 102-115.
- Martin, R., & Sunley, P. (2003). Deconstructing clusters: Chaotic concept or policy panacea? *Journal of Economic Geography*, 3(1), 5-35. <https://doi.org/10.1093/jeg/3.1.5>
- Mashkina, A. (2023). Modern doctrines of socio-economic development of enterprises in the conditions of the knowledge economy. *Economy and Society*, 58. <https://doi.org/10.32782/2524-0072/2023-58-72>
- Ministry of Education and Science of Ukraine (2024, November 4). Ukraine and Germany signed an agreement on cooperation in science, technology, innovation and higher education. *Ministry of Education and Science of Ukraine*. <https://acortar.link/IPw2vu>
- Mokhniuk, R. S. (2022). Inclusion as one of the directions of the civil society development strategy: a factor of culture creation. *Issues of Cultural Studies*, 39, 182-193. <https://doi.org/10.31866/2410-1311.39.2022.256926>

- Mokiy, A. I., Yankiv, M. D., Yakhno, T. P., & Gorin, N. V. (2004). *Regulation of the world economy*. Lviv Polytechnic National University.
- Moroz, Y., Romanchuk, L., & Abramova, I. (2024). Peculiarities of financing the development of rural communities and territories at the expense of the EU's joint budget. *Economic Journal-XXI*, 2-3(3), 9-18.
<https://eztur.ztu.edu.ua/jspui/bitstream/123456789/8625/1/9.pdf>
- National Bank of Ukraine (2022). Economic and Financial Review.
<https://bank.gov.ua/en/news/all>
- National Defense University of Ukraine (2020). UN Sustainable Development Goals: Sweden's results. *Bulletin of the National Defense University of Ukraine*, 1, 292-293.
https://reposit.nupp.edu.ua/bitstream/PoltNTU/10163/3/Збірник_с._292-293.pdf
- OECD (2021). Income distribution and poverty in Switzerland.
<https://www.oecd.org/economic-surveys>
- Oliinyk, O. S., Shestopalov, R. M., Zarosylo, V. O., Stankovic, M., & Golubitsky, S. (2022). Economic security through criminal policies: A comparative study of Western and European approaches. *Revista Cientifica General Jose Maria Cordova*, 20(38), 265-285.
<http://dx.doi.org/10.21830/19006586.899>
- Pedersen, T., & Holm, L. (2023). The role of green innovation in Norway's energy transition: Key challenges and opportunities. *Renewable and Sustainable Energy Reviews*, 160, 112265.
- Peters, B., & Wouters, A. (2021). The Dutch green transition: Sustainability policies and renewable energy adoption. *Environmental Economics Journal*, 14(2), 105-118.
- Romanuk, N. A., & Romanuk, R. Y. (2023). Institutional formats of European security: Experience and prospects of transformation. In M. M. Palinchak (Ed.), *Regional studies: Scientific collection* (pp. 155-161). Helvetika Publishing House.
<https://doi.org/10.32782/2663-6170/2023.33.23>
- Rossi, P., & Tuomi, S. (2023). The role of digital democracy: E-voting in Estonia's electoral system. *Journal of Public Administration Research and Theory*, 33(1), 98-112.
<https://doi.org/10.1093/jopart/muac015>
- Savchyn, I. Z., & Perepeliukova, O. V. (2024). International experience in regulating the convergence of regional development. *Business Inform*, 5, 43-49.
<https://doi.org/10.32983/2222-4459-2024-5-43-49>
- Scandurra, R., Cefalo, R., & Kazepov, Y. (2021). Factors of youth integration into the labor market in European regions. *Social Indicators Research*, 154, 835-856.
<https://doi.org/10.1007/s11205-020-02549-8>
- Shevchenko, O. V. (2021). *Strategic Regulation of Disproportions in the Socio-Economic Development of Ukrainian Regions* (Doctoral Thesis, National University "Yuri Kondratyuk Poltava Polytechnic"). <https://acortar.link/BWfVPN>

- Shtan, M. (2023). Institutional determinants of the state economic policy. *Economy and Society*, 57. <https://doi.org/10.32782/2524-0072/2023-57-90>
- State Statistics Service of Ukraine (2022). Labour Market and Employment Statistics. <https://ukrstat.gov.ua>
- Tkachuk, A. N. (2023). Modifications of employment structure: Global trends and national features. *Business Inform*, 12, 223-230. <https://doi.org/10.32983/2222-4459-2023-12-223-230>
- UNESCO (2021). Education in Ukraine: Progress and Challenges. <https://www.unesco.org/en/education>
- Ushchapovskyi, Y. V. (2023). Methodological potential of institutional research in modern economic science. *Economics, management and administration*, 2(104), 26-31. [https://doi.org/10.26642/ema-2023-2\(104\)-26-31](https://doi.org/10.26642/ema-2023-2(104)-26-31)
- Varnalii, Z., Kulyk, P., Nikytenko, D., Cheberyako, O., & Hurochkina, V. (2023). Circular economy implementation as a strengthening factor in the economic security of Ukraine during the post-war period. *IOP Conference Series: Earth and Environmental Science*, 1126(1), 012006. <https://doi.org/10.1088/1755-1315/1126/1/012006>
- Vickerman, R. (2013). *The economics of European integration*. Routledge.
- World Bank (2022). Ukraine Overview. <https://www.worldbank.org/en/country/ukraine>
- World Bank (n.d.). Sweden. The World Bank. <https://data.worldbank.org/country/sweden>
- World Health Organization (2021). Ukraine Health System Review. <https://www.who.int/countries/ukr>
- Yang, Y. (2015). Comparative study on STEM education of primary and secondary schools in America, Germany and Japan. *Primary & Secondary Schooling Abroad*. <https://acortar.link/j3bfUB>
- Yeremieiev, O. (2024). Tendencies of Contemporary European National Communities' Development in Context of Fourth Industrial Revolution and Globalization Processes. *Empirio*, 1(1), 11-21. <https://doi.org/10.18523/3041-1718.2024.1.11-21>
- Yermachenko, V., Bondarenko, D., Akimova, L., Karpa, M., Akimov, O., & Kalashnyk, N. (2023). Theory and practice of public management of smart infrastructure in the conditions of the digital society' development: Socio-economic aspects. *Economic Affairs (New Delhi)*, 68(1), 617-633. <https://doi.org/10.46852/0424-2513.1.2023.29>
- Zhao, Y., & Xu, X. (2022). The Development of Renewable Energy in China: Opportunities and Challenges. *Energies*, 15(15), 5422. <https://doi.org/10.3390/en15155422>

AUTHORS' CONTRIBUTIONS, FINANCING AND ACKNOWLEDGMENTS

Contributions of the Authors:

Conceptualization: Chichulina, Kseniia; **Software:** Zapukhlyak, Vitaliy; **Validation:** Kindrativ, Vladyslav; **Formal Analysis:** Sakharnatska, Liudmyla; **Healing of data:** Ivashchuk, Oleh; **Writing-Preparation of the draft original:** Chichulina, Kseniia; **Editorial-Re- vision and Edition:** Chichulina, Kseniia and Ivashchuk, Oleh; **Display:** Ivashchuk, Oleh; **Supervision:** Chichulina, Kseniia and Zapukhlyak, Vitaliy; **Project Administration:** Sakharnatska, Liudmyla. **All Authors have read and accepted the published version of the manuscript:** Chichulina, Kseniia; Ivashchuk, Oleh; Zapukhlyak, Vitaliy; Sakharnatska, Liudmyla; Kindrativ, Vladyslav.

Financing: This investigation received no financing external.

AUTHOR/S:

Kseniia Chichulina

National University “Yuri Kondratyuk Poltava Polytechnic”, Ukraine.

Kseniia Chichulina holds a PhD in Technical Sciences and is an Associate Professor at the Department of Economics, Entrepreneurship and Marketing at the National University “Yuri Kondratyuk Poltava Polytechnic” in Poltava, Ukraine. Her academic interests include economic development, entrepreneurship, and marketing policy in transitional economies. She actively participates in research projects aimed at regional socio-economic transformation and innovation in business education.

chichulinak@ukr.net

ORCID ID: <https://orcid.org/0000-0001-7448-0180>

Oleh Ivashchuk

West Ukrainian National University, Ukraine.

Dr Oleh Ivashchuk is a PhD in Economics and a Lecturer at the Department of International Economics at West Ukrainian National University in Ternopil, Ukraine. His research focuses on international trade, European integration, and sustainable regional development. He is also involved in projects concerning Ukraine’s economic alignment with EU standards.

o.v.ivashchuk@wunu.edu.ua

ORCID ID: <https://orcid.org/0000-0002-6261-8688>

Vitaliy Zapukhlyak

West Ukrainian National University, Ukraine.

Dr Vitaliy Zapukhlyak holds the academic degree of Candidate of Sciences in Economics. He is affiliated with West Ukrainian National University, where he contributes to research on economic security, public finance, and regional economic systems. His work involves interdisciplinary approaches to economic modeling and development strategies.

vitaliyzapukhlyak@gmail.com

ORCID ID: <https://orcid.org/0000-0001-8976-4477>

Liudmyla Sakharnatska

State University "Uzhhorod National University", Ukraine.

Liudmyla Sakharnatska is a Candidate of Economic Science, Senior Researcher, and Associate Professor at Uzhhorod National University. She also holds a Senior Researcher position at the Transcarpathian Regional Centre for Socio-Economic and Humanities Research of the National Academy of Sciences of Ukraine. Her scholarly work addresses regional development, cross-border cooperation, and socio-economic transformations in border areas.

liudmyla.sakharnatska@gmail.com

ORCID ID: <https://orcid.org/0000-0002-5863-4917>

Vladyslav Kindrativ

Interregional Academy of Personnel Management, Ukraine.

Vladyslav Kindrativ is a PhD student in Management at the Interregional Academy of Personnel Management in Poltava, Ukraine. His academic interests include organizational development, innovation management, and strategic planning in public and private sectors. He is involved in early-career research on institutional effectiveness and regional management models.

vkindrativ9@gmail.com

ORCID ID: <https://orcid.org/0009-0001-7154-5521>